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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,215	08/16/2001	Yoshiju Watanabe	H-999	9443

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MATTINGLY, STANGER & MALUR, P.C.  
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EXAMINER

LAMARRE, GUY J

ART UNIT PAPER NUMBER

2133

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/930,215

**Applicant(s)**

WATANABE ET AL.

**Examiner**

Guy J. Lamarre, P.E.

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### FINAL OFFICE ACTION

1. This office action is in response to Applicants' Amendment of 2 Nov. 2004.
- 1.1 **Claims 1-2, 7-8** are amended; **Claim 6** is cancelled. **Claims 1-5, 7-10** remain pending.
- 1.2 The objections and rejections under 35 USC § 112 of record are withdrawn in response to Applicants' amendment.
- 1.2.1 The prior art rejections of record are maintained in response to Applicants' amendment.

### Response to Arguments

- 1.3 Applicants' arguments have been fully considered, but are not found persuasive because to store the reproduced data, some form of synchronization must have been previously performed to enable identification of said reproduced data. Sync detection entails bit sequence repetition/frequency tracking/counting means as seen in the prior art of record.

### Claim Objections

2. The listed claims are objected to because of the following informalities:  
  
**Claim 1**, in passim recites: "based the number" instead of "based on the number" in line 9. Appropriate correction is required.

### Claim Rejections - 35 USC § 102

3. **Claims 1-5,7-10** are rejected under 35 U.S.C. 102(b) as being anticipated by **Aoki et al.** (US Patent No. 5,963,602; 5 Oct. 1999).

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As per **Claim 1**, **Aoki et al.** discloses data synchronization detection (col. 5 line 15 et seq. and Figs. 1-18 and related description thereof) with code-modulated reproduced data identifying means (col. 1 line 47 et seq.), specified bit pattern counting or tracking means (col. 1 line 14 et seq./col. 2 line 47 et seq.), means for identifying codeword partitions of said reproduced data code modulation from the results of said count of the number of occurrences of the specified bit pattern (col. 1 line 21 et seq./col. 3 line 30), and means for outputting said stored

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identified output in synchronization with said code modulation phase, in accordance with the specified code modulation phase (col. 2 lines 28, 45 et seq.).

**As per Claim 2, Aoki et al.** discloses data synchronization detection according to claim 1, further comprising: finding the correlation of a front section of the identified output of the code-modulated reproduced data and a PLO\_SYNC pattern that reproduces the clock synchronization of data reproduction; and specifying the position of a data portion based on the correlation thus found in col. 2 line 62 and Figs. 1-7 and related description thereof, wherein a window provides equivalent correlation means for synchronization detection.

**As per Claim 3, Aoki et al.** discloses data synchronization according to claim 1, further comprising: finding the correlation of a rear section of the identified output of said code-modulated reproduced data and a GAP pattern for correctly reproducing the final bit of said reproduced data; and specifying the position of a data portion based on the correlation thus found in col. 2 line 62 and Figs. 1-7 and related description thereof, wherein a window provides equivalent correlation means for synchronization detection.

**As per Claim 4, Aoki et al.** discloses data synchronization according to claim 1, further comprising: finding, for a data position detection pattern (col. 3 line 30 et seq.) provided at an intermediate position in the data, the correlation of an intermediate portion of the identified output of code-modulated reproduced data and a data position detection pattern; and specifying the position of a data portion based on the correlation thus found (col. 2 line 62 and Figs. 1-7 and related description thereof) wherein a window provides equivalent correlation means for synchronization detection.

**As per Claim 5, Aoki et al.** discloses data synchronization detection according to claim 1, further comprising selecting reproduced data used for data synchronization detection, or reproduced data used for position detection of a data portion, by means of a data quality signal

representing the probability that there is an error in the identified output of the reproduced data (col. 4 line 33 et seq.).

**As per Claim 7, Aoki et al.** discloses method of recording information comprising the steps of: a step for scrambling data (col. 3 line 8, col. 4 line 42 et seq.) by two or more types of scrambler; a step for code-modulating (col. 4 line 42 et seq.) the scrambled data; a step for counting (col. 1 line 14 et seq./col. 2 line 47 et seq.) the number of occurrences of a specified bit pattern in the bit sequence of this code-modulated data, in an arbitrary bit period; a step for determining (col. 1 line 21 et seq./col. 3 line 30), whether or not the position of a code-modulation codeword partition of the data can be specified by a prescribed threshold value of the count result of the number of occurrences of the specified bit pattern; and a step for recording data obtained by code-modulation of data scrambled by the scrambler which has been determined to be capable of specifying the position of the code-modulation codeword partition(col. 2 lines 28, 45 et seq.).

**As per Claim 8, Aoki et al.** discloses method of recording information according to claim 7, further comprising a step for recording the information of the scrambler (col. 3 line 8, col. 4 line 42 et seq.) which has been determined to be capable of specifying the position of the code-modulation codeword partition.

**As per Claim 9, Aoki et al.** discloses method of reproducing information coping: detecting data synchronization using the data synchronization detection method according to claim 1; code-demodulating the data in accordance with a specified code modulation phase; descrambling (e.g., Figs. 5-6: resp. blocks 503 & 603 and related description thereof), the code-demodulated data with two or more types of descrambler; detecting error (Figs. 5-6: blocks 511 and related description thereof) in respect of the descrambled data; and outputting as reproduced data the output data of the descrambler for which the number of detected errors is smallest.

As per Claim 10, Aoki et al. discloses method of reproducing information using the output data of a descrambler (e.g., Figs. 5-6: block 509 and related description thereof, col. 3 line 8, col. 4 line 42 et seq.) as reproduced data, comprising: inputting reproduced data including descrambler information; detecting data synchronization (e.g., Figs. 5-6: resp. blocks 503 & 603 and related description thereof), using the data synchronization detection method according to claim 1; code-demodulating data in accordance with a specified code-modulation phase; error-correcting (Figs. 5-6: blocks 511 and related description thereof) the code-demodulated data; and descrambling in accordance with scrambling information included in the error-corrected data

### Conclusion

4. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4.1 Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy J. Lamarre, P.E., whose telephone number is (703) 305-0755. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (703) 305-9595.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Guy J. Lamarre, P.E  
Primary Examiner  
4/4/05

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